AD-A122 722 LOCAL TELECOMMUNICATION CABLES LAYERED WITH INSULATION 1/1
AND POLYETHYLENE COATINGS(U) FOREIGN TECHNOLOGY DIV
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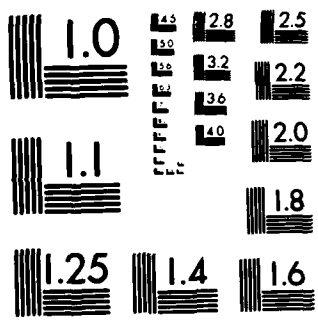

MICROCOPY RESOLUTION TEST CHART
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FOREIGN TECHNOLOGY DIVISION

LOCAL TELECOMMUNICATION CABLES LAYERED WITH INSULATION AND POLYETHYLENE COATINGS

by

Tadeusz Lapinski

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EDITED TRANSLATION

FTD-ID(RS)T-1323-82 15 October 1982

MICROFICHE NR: FTD-82-C-001327

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English pages: 2

Source: Wiadomosci Elektrotechniczne, Vol. 15, Nr. 18, 1979, pp. 501

Country of origin: Poland
Translated by: MSgt James D. Tousignaut
Requester: RCA
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LOCAL TELECOMMUNICATION CABLES LAYERED WITH INSULATION AND POLYETHYLENE COATINGS

Tadeusz Lapinski

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With the rational aim of utilizing the production machines and equipment of the M. Buczka Cables Factory in Ozarow Mazowiecki, production was of local telecommunication cables layered with insulation, polyethylene coatings, and an antimoisture barrier was started. The cables were developed by the ENERGOKABEL Research and Development Center. They are designated by the symbols XTKMpX and have strands 0.8 mm in diameter as well as quad numbers 5, 10, 15, 25, 35, and 50. Groups in core and individual layers are identified with the help of counter, direction, uneven and even groups.

The rated effective capacitance of the quad matrix circuit equals 50 nF/km. In practice, their mean value is included in the 49-50 nF/km range and their maximum value equals 52.2 nF/km.

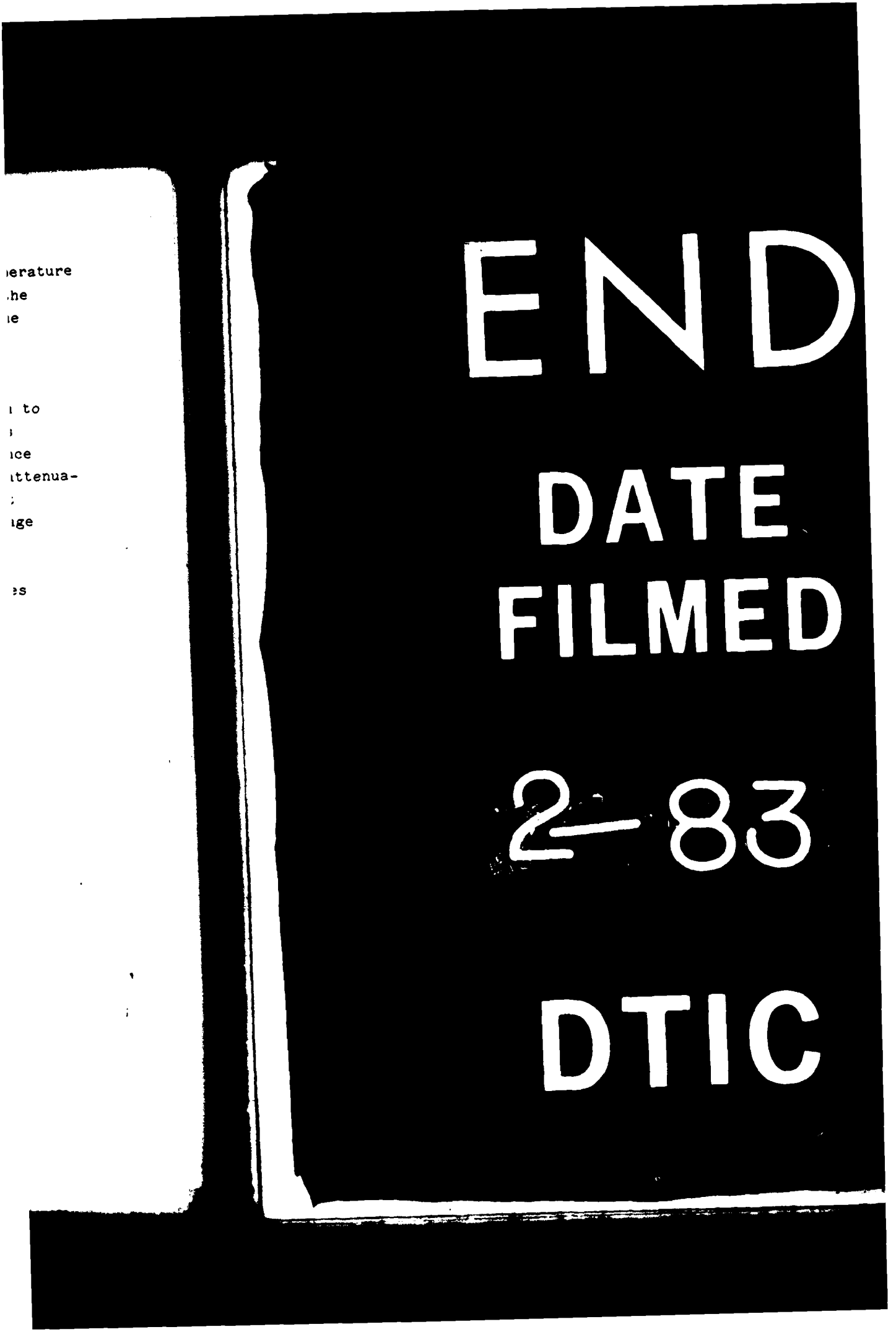
Asymmetry of the capacitance in quad (k_1) for a 600 m long section of fabricated cable does not exceed 500 pF. Measurements of several cable sections disclosed that k_1 does not exceed 400 pF/1800 m and its mean value equals 130 pF/1800 m.

Resistance of the conductors for direct current at a temperature of 20°C does not exceed 38.7 Ω/km. Measurements showed that the mean value of circuit resistance of conductors falls within the 69.1 to 70.1 Ω/km range and the maximum value does not exceed 71.3 Ω/km.

The resistance of each conductor's insulation in relation to others, connected with themselves as well as with a shield, is greater than 5000 MΩ/km. The actual component of wave impedance of circuits at a frequency of 800 Hz equals 370 Ω and a wave attenuation of 0.8 dB/km. The insulation of conductors holds without breakdown in the course of a one minute alternating test voltage at a frequency of 50 Hz:

- 2000 V between the grounded shield and conductors' cores interconnected.

- 750 V between interconnected conductors and conductors connected with themselves, with a shield and with a ground.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